

# Providing consistent data and information on the status of water resources as the basis for integrated drought risk management



Stefan Uhlenbrook , Sulagna Mishra and MANY others

**WMO OMM**

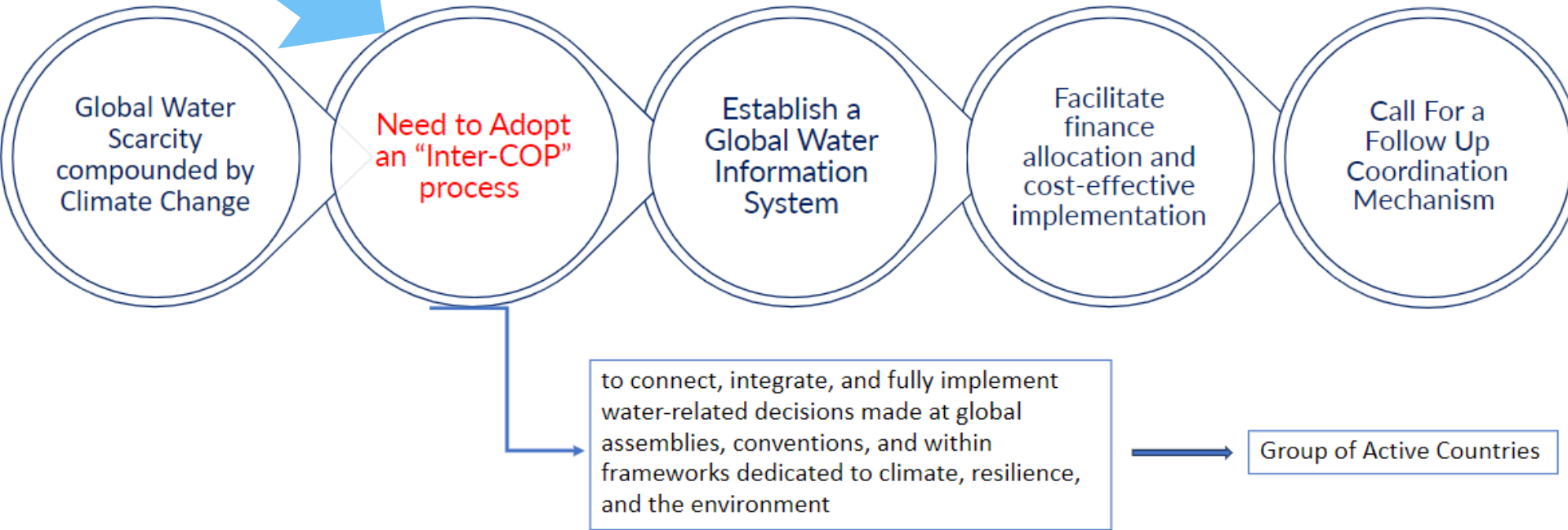
World Meteorological Organization

Organisation météorologique mondiale

# UN 2023 Water Conference March 2023

Egypt and Japan Co- Chairmanship of Interactive Dialogue no. 3 on Water and Climate

## Key messages and recommendations

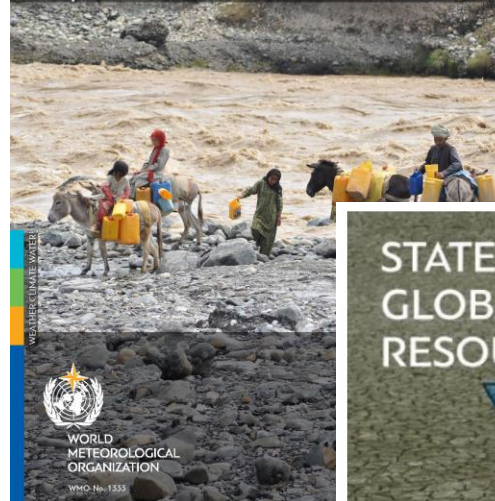


Source: Prof. Dr. Hani Sewilam, Minister of Water and Irrigation, Egypt, UN, March 2023

# State of Global Water Resources 2023

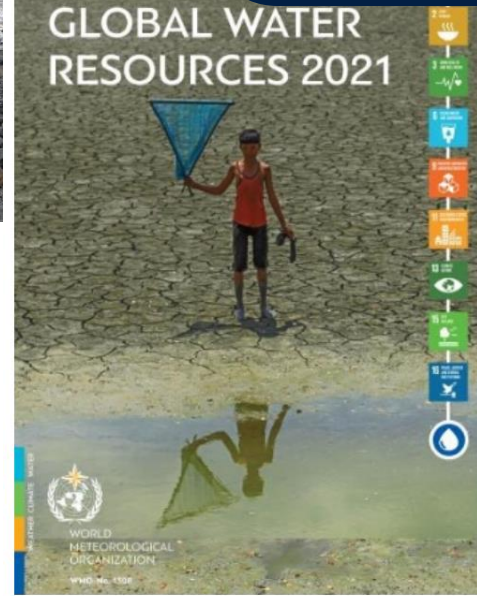
- Provide a quantitative assessment of global water resources in the last year
- Give an overview of status on data availability and data sharing at a global scale
- Use innovative methodology used to overcome the gaps in available observations

## State of Global Water Resources 2022 Report

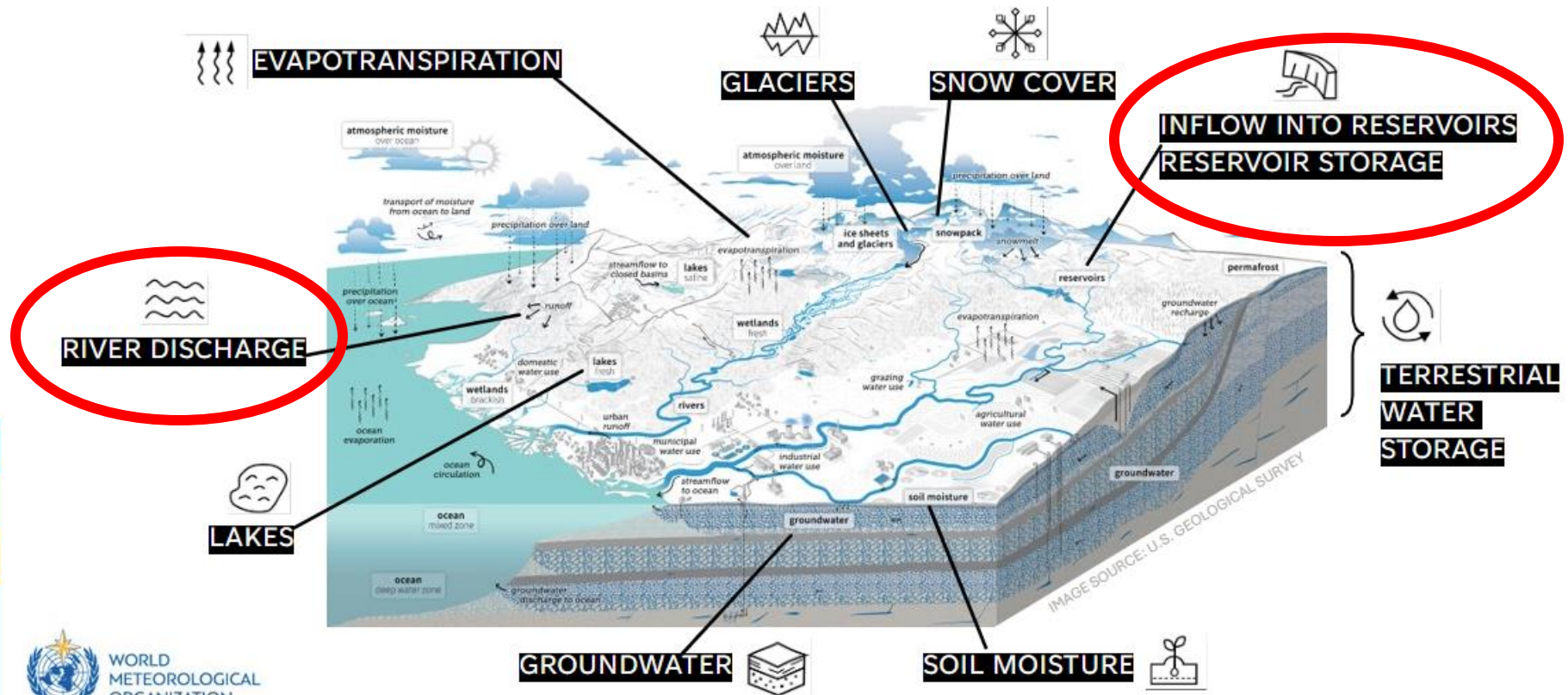


2023 Report,  
*Launch*  
7 Oct 2024

## STATE OF GLOBAL WATER RESOURCES 2021

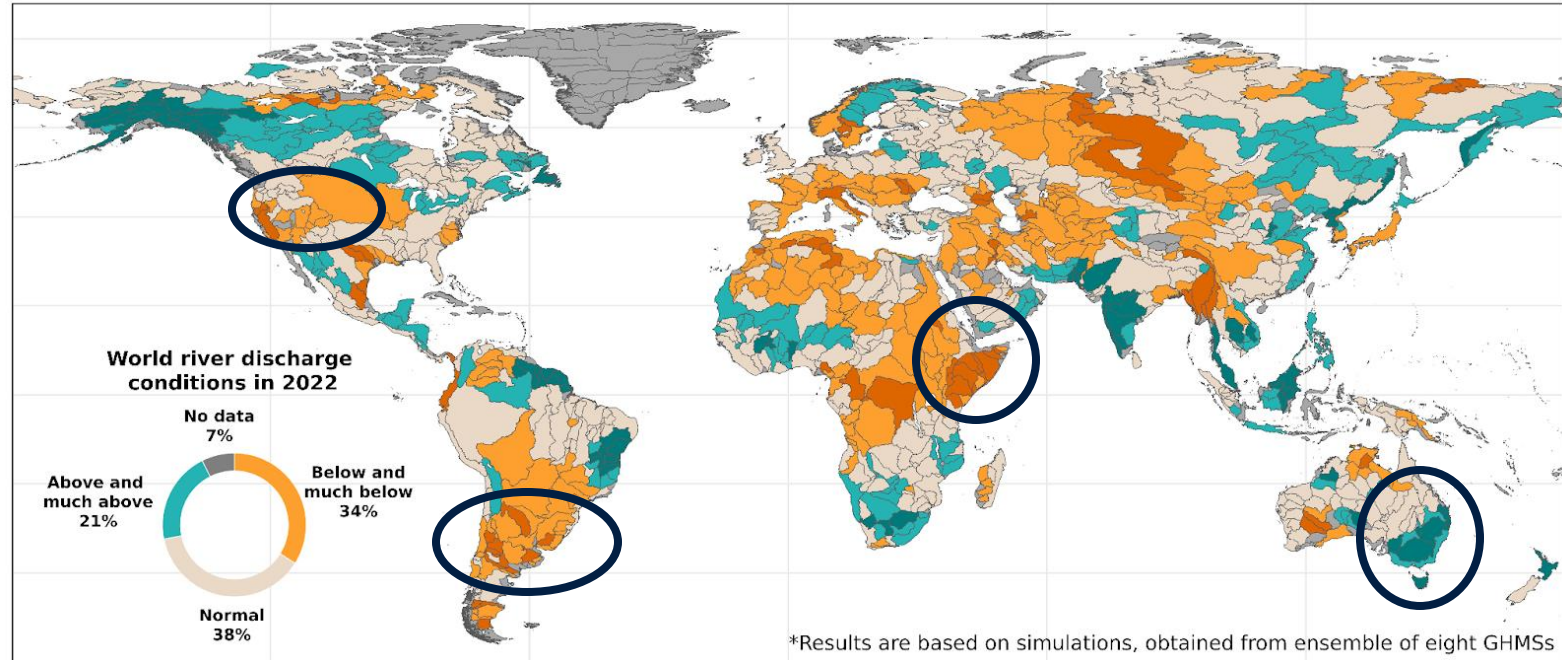


# WATER (HYDROLOGICAL) CYCLE





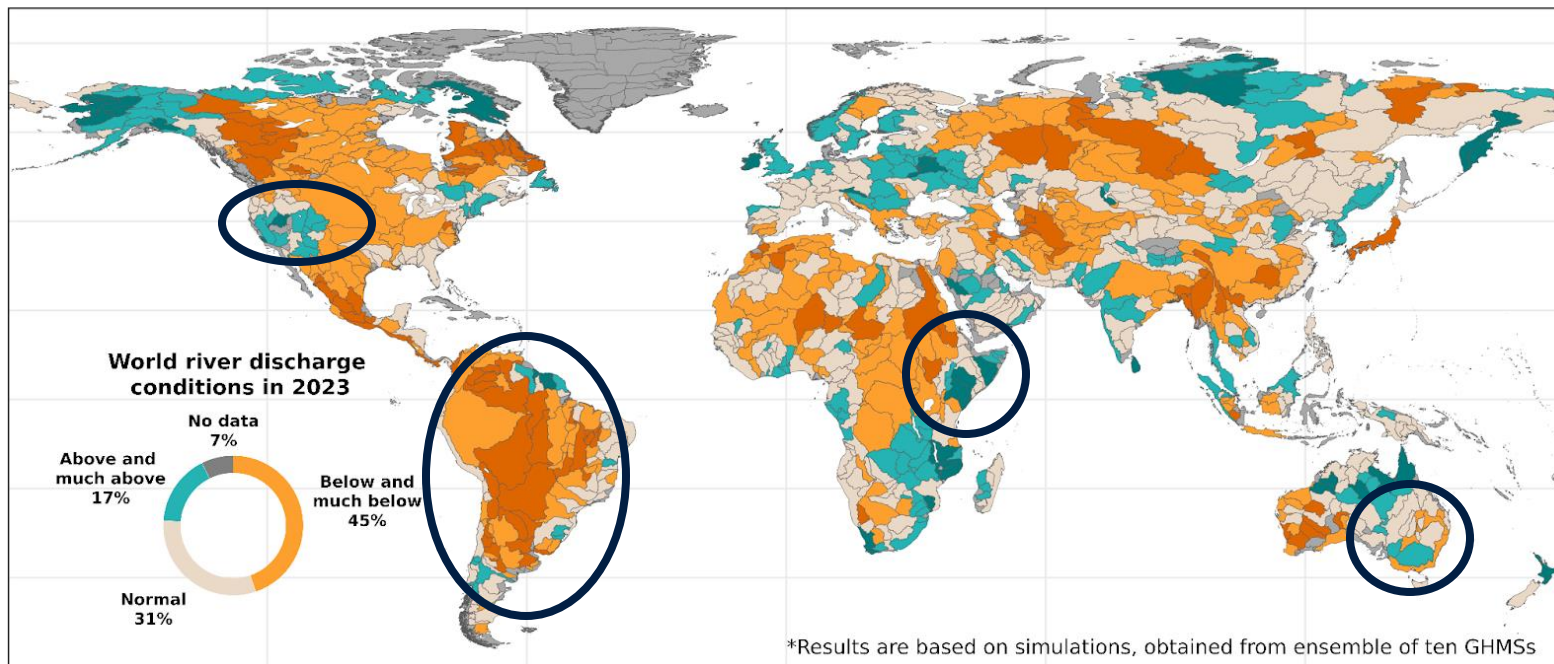
# River discharge anomalies 2022



WMO (2023)

**River discharge in 2022 w.r.t. the hydrological normal for each basin**  
(calculated based on 30 years historic data, 1991-2020)

# ...now, let's compare it with 2023



Work in progress,  
WMO (2024)

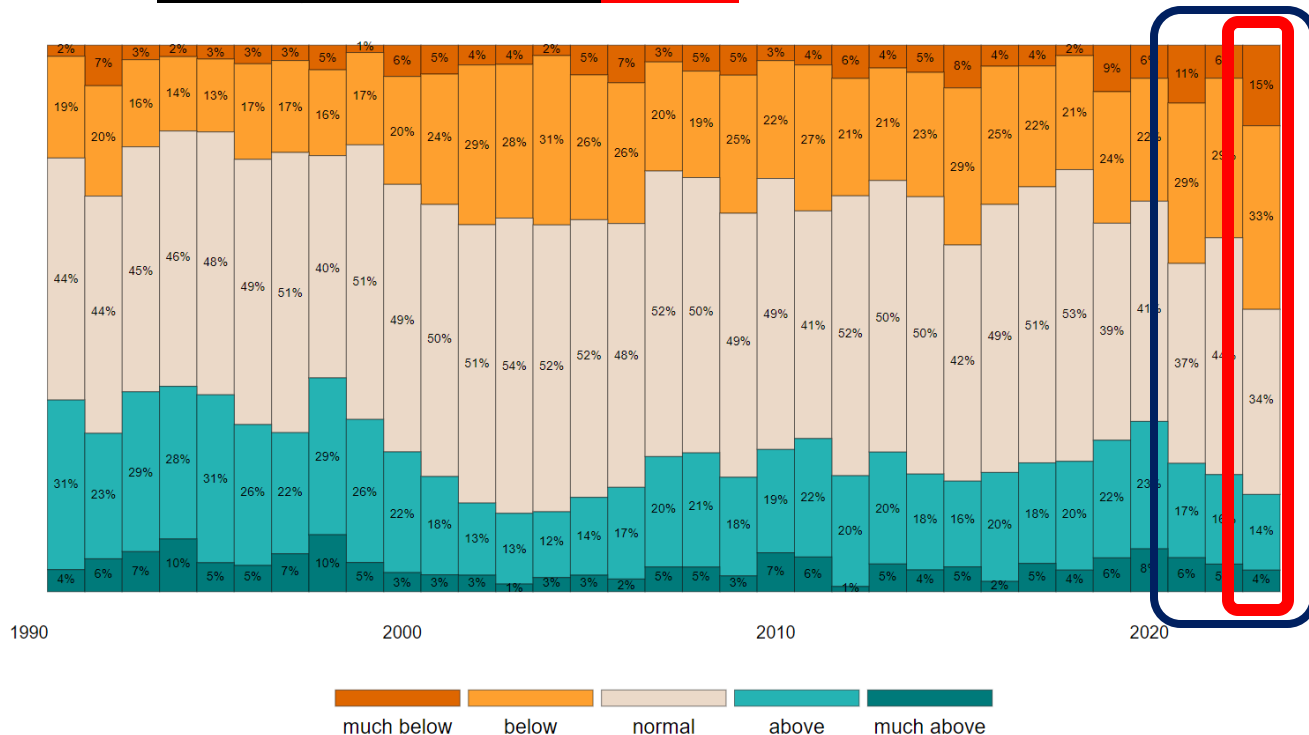


**River discharge in 2023 w.r.t. the hydrological normal for each basin**  
(calculated based on 30 years historic data, 1991-2020)

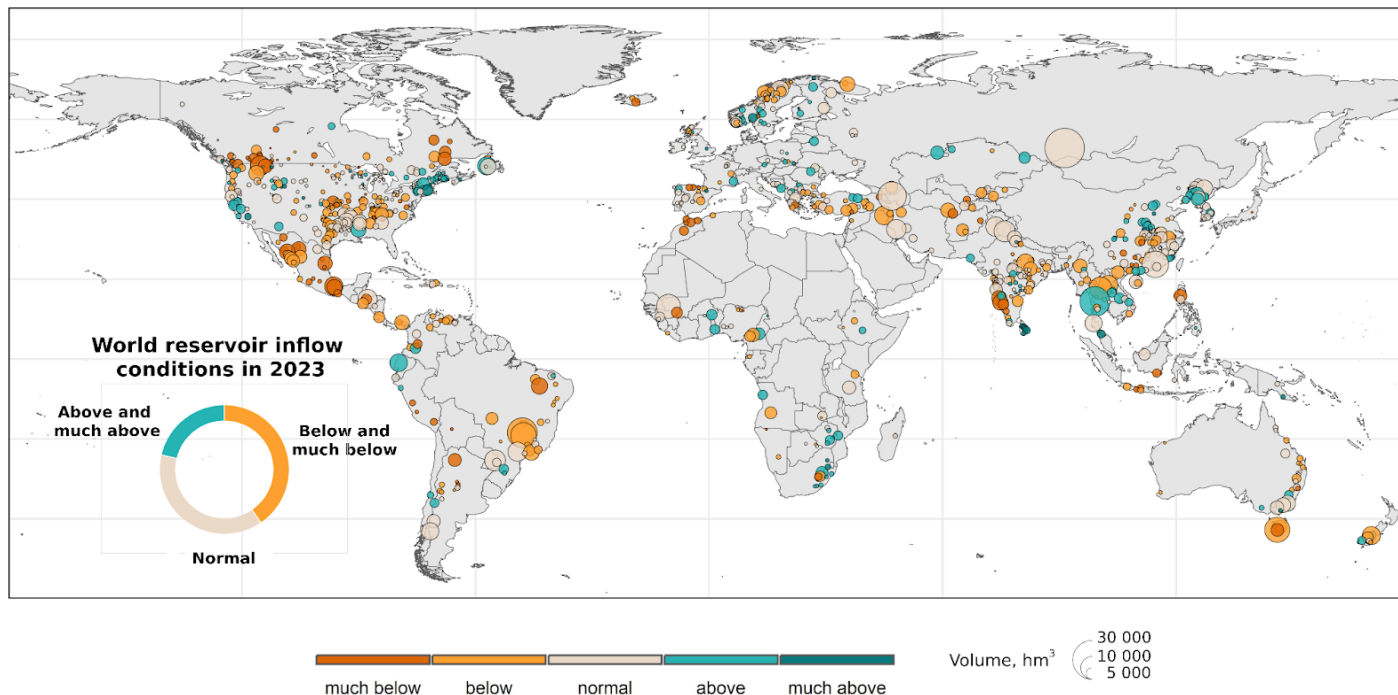
# The global area under different river discharge conditions for 2021, 2022 and 2023

**Increasing Dry Conditions:** 2023 being the driest year in the last 33.

**Low Normal Discharge in Recent 5 Years**



# Anomaly in the mean annual inflow into selected reservoirs in 2023



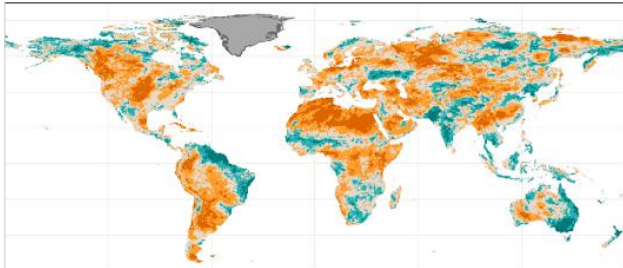
Work in progress,  
WMO (2024)

**Reservoirs Inflow in 2023 w.r.t. the normal for each reservoir**  
(calculated based on 30 years historic data, 1991-2020)

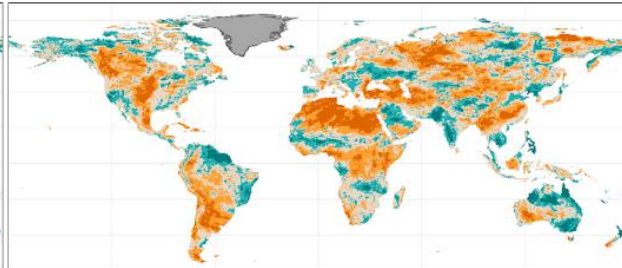


# Status of Soil Moisture in 2023 for selected months

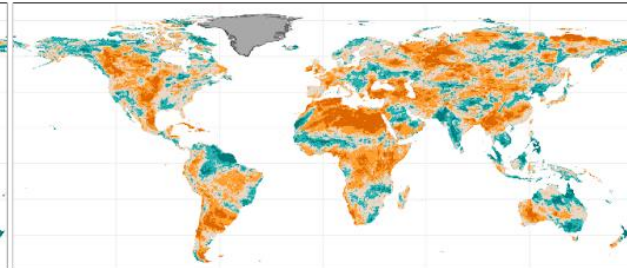
December



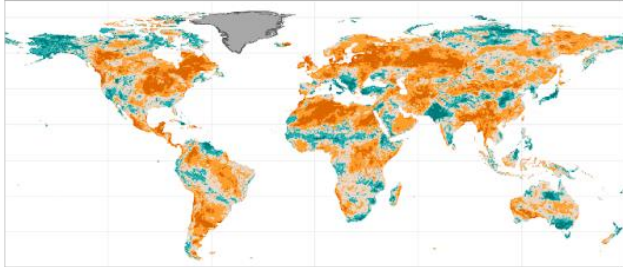
January



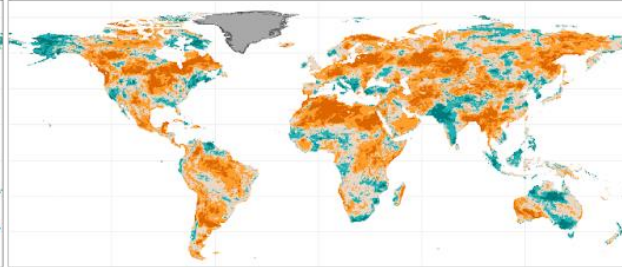
February



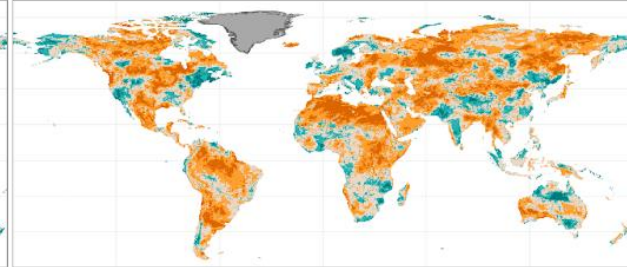
June



July



August



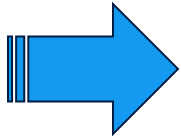
much below   below   normal   above   much above

Data Source: 3 GHMS

Historic reference period 1991 - 2020

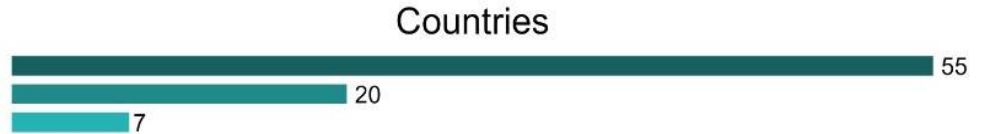
# Added Value of this Report

- Easy to understand global overview and graphical summaries of different hydrological variables at a global scale (standardized, consistent, authoritative)
  1. Help in identification of hotspots at a global scale to inform planning and policy making
  2. Enable inter-annual comparisons to differentiate short-term effects from long-term trends in the factors driving water distribution patterns
  3. Inform inter-governmental discussions and different sectors related to (shared) water resources



*Promotes monitoring  
and data sharing*

2023  
2022  
2021



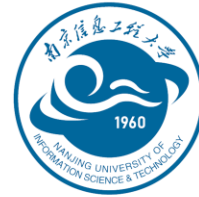
2023  
2022  
2021



# Collaborative process – *THANK YOU*



Universiteit  
Utrecht



Deltares

SENCKENBERG  
world of biodiversity



GLOBAL WATER FUTURES



**BYU Civil & Construction  
Engineering**

